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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,966	03/18/2005	Bruce Guy Irvine Dance	GJE-7522	9054

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EXAMINER	
HEINRICH, SAMUEL M	

ART UNIT	PAPER NUMBER
3742	

MAIL DATE	DELIVERY MODE
09/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,966	DANCE ET AL.	
	Examiner	Art Unit	
	Samuel M. Heinrich	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,861,407 to Volkmann et al.

Volkmann et al describe (e.g., Abstract) pretreatment of a workpiece by using an energy beam to form projections on a surface and subsequently adhesively bond the treated workpiece to another workpiece. The projections improve the joint strength.

Volkmann et al describe (e.g., column 5, lines 30-36 and column 14, lines 36-40) "back and forth" translation in order to overlap the treatment of a pulse treated area by 150 percent.

Repeating the surface treatment described by Volkmann et al would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art in a manner similar to sanding the surfaces of two workpieces in order to get superior bonding.

The instant claimed elongate, rectilinear, and curved shapes would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art depending on the relative motion between the laser and workpiece and the resulting projection shape.

The instant claimed modification of the bulk structure of the workpiece and of the surface structure of the workpiece would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art depending on the dimensions and material of the workpiece.

Volkmann et al describe back and forth treatment which inherently allows the melted material to at least partially solidify between formation of subsequent projections. The instant claimed particular timing would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art depending on the translation capability of the laser apparatus and depending on properties of the workpiece such as heat transfer.

Volkmann et al describe (column 5, lines 4-15) the workpiece may be coated with a different material and some formation of an alloy during processing would be inherent.

Volkmann et al describe (column 10, lines 13-22) use of a protective atmosphere or a mixture of gases which may enhance the treatment of the surface, i.e., chemical change.

Forming some loops would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the treatment of an area is overlapped repeatedly.

Volkmann et al describe (column 4, lines 42-50) that the beam issuing from the laser can be altered, and describe (column 6, lines 42-44) that when a longer pulse time is used then the amount of laser energy needs to be increased. The instant claimed reduction of power for altering the projection shape would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art depending on the desired surface finish.

Volkmann et al describe (column 2, lines 49-62) joining two surfaces which have been treated with the energy beam and it would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art that some projections and some apertures would mechanically engage.

Joining more than two bodies would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art depending the number of layers desired, for example joining to both sides of a metal workpiece.

Claims 1-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,176,959 to Clarke.

Clarke uses an energy beam to form projections on a surface and subsequently adhesively bond the workpiece to another workpiece. The projections improve the joint strength. Clarke does not describe timing steps in order to allow the melted material to at least partially solidify between formation of subsequent projections.

Repeating the microtexturization described by Clarke would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art in a manner similar to sanding the surfaces of two workpieces in order to get superior bonding.

Clarke describes (column 2, line 36+) forming an oxide layer.

The instant claimed particular timing would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art depending on the translation capability of the laser apparatus and depending on properties of the workpiece such as heat transfer.

Joining more than two bodies would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art depending the number of layers desired, for example joining to both sides of a metal workpiece.

Response to Arguments

Applicant's arguments filed May 20, 2008 have been fully considered but they are not persuasive.

Applicant argues that the cited prior art does not produce the larger and more complex structures describe in the instant disclosure. This argument is not convincing.

The change of size and shape of the projections described in the prior art is only a change in degree and not a change in kind.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art pertains to laser texturing and treating of surfaces.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel M. Heinrich whose telephone number is 571-272-1175. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu B. Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samuel M Heinrich/
Primary Examiner, Art Unit 3742